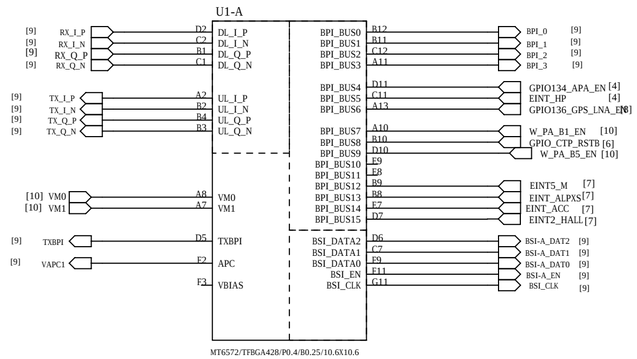
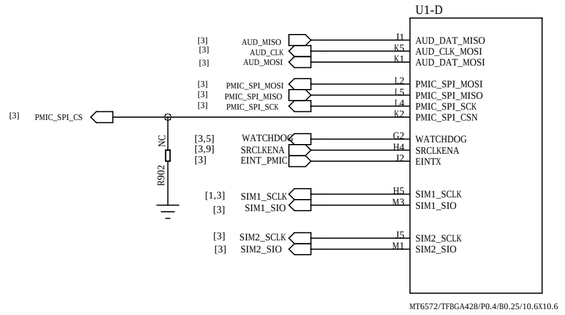
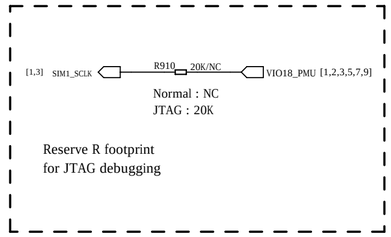
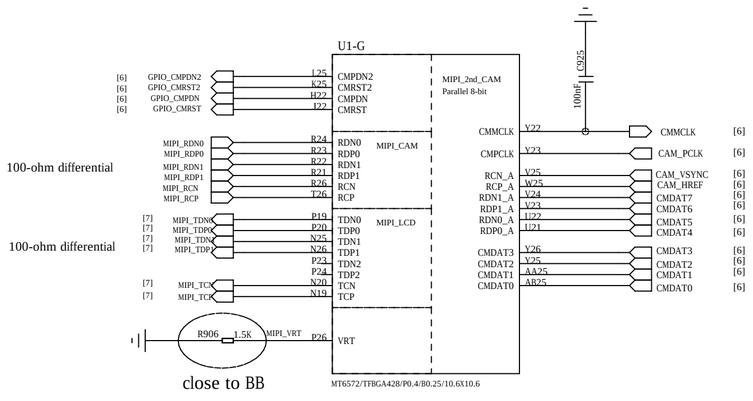
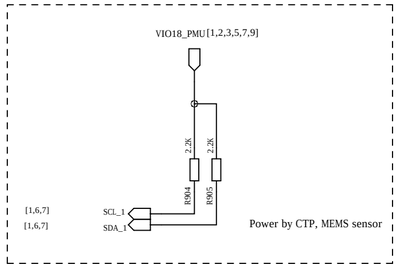


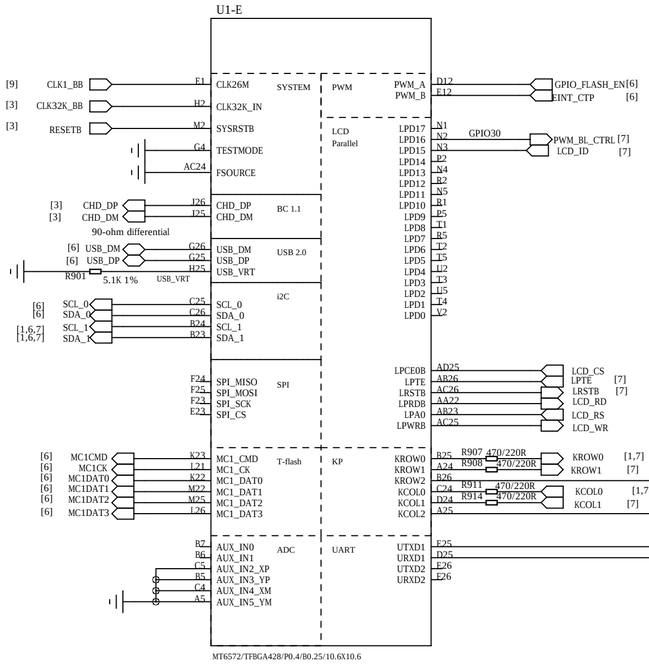


reserve for JTAG debug

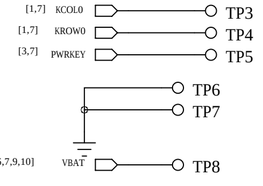


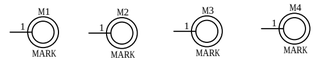






MT6572 support JTAG from below :
1. KP (recommand)
2. MC1
3. CAM
for JTAG pin out from MC1/CAM, refer to HW design notice





cap Close to BB IC

cap Close to BB IC

U1-H

[1,2,3,5,7,9] VIO18_PMU

[1,2,3,5,7,9] VIO18_PMU
[3] VUSB_PMU

T25 DVDD18_MIPIRX
U25 DVSS18_MIPIRX
R25 DVDD18_MIPITX
P25 DVSS18_MIPITX
H23 AVDD18_USB
G24 AVDD33_USB
G23 AVSS33_USB
F6 REFP
G6 REFN
BG

AVDD28_DAC F1 VTCXO_PMU
AVDD18_AP F5
DVDD18_PLLGP J9 VIO18_PMU
AVDD18_MD D3
AVSS18_MD A1
AVSS18_MD A4
AVSS18_MD C3
AVSS18_MD E2

C1001 100nF
C1002 100nF
C1003 100nF
C1030 1uF
C1029 1uF
C1028 100nF
C1007 100nF
C1008 100nF

VTCXO_PMU [3,9]
VIO18_PMU [1,2,3,5,7,9]
VIO18_PMU [1,2,3,5,7,9]

MT6572/TFBGA428/P0.4/80.25/10.6X10.6

dedicate VSS ball, must return to cap then to main GND:
1. REFN(G6) => C1006
2. DVSS18_MIPIRX(U25) => C1001
3. DVSS18_MIPITX(P25) => C1002

U1-B

1.8V IO for DDR1
1.2V IO for DDR2

VCC Memory
VCCIO_EMI W9
VCCIO_EMI W12
VCCIO_EMI W14
VCCIO_EMI W16
VCCIO_EMI W19

VIO_EMI [5]

C1009 100nF
C1010 100nF
C1011 100nF

DVDD Peripheral
DVDD18_MC0 AA1
DVDD18_CAM K20
DVDD18_VIO_1 L3
DVDD18_VIO_2 J19
DVDD18_VIO_3 H13
DVDD18_LCD AB24

VIO18_PMU [1,2,3,5,7,9]

0R R119

DVDD3_MC1 K24
DVDD3_LCD W24
DVDD28_BPI C10

VMC_PMU [3]
VIO28_PMU [3,4,6,7]

C1031 1uF
C1037 NC
C1032 1uF

Close to BB IC, recommand < 150mil

Based on your system level design , if better FM performance is needed on your system , please refer to FM desense performance enhance proposal

VCC CPU
VCCK_CPU P6
VCCK_CPU T7
VCCK_CPU P7
VCCK_CPU P8
VCCK_CPU P9
VCCK_CPU R6
VCCK_CPU R7
VCCK_CPU R8
VCCK_CPU R9
VCCK_CPU T6
VCCK_CPU J6
VCCK_CPU T9
VCCK_CPU T8
VCCK_CPU U7

VCC Core
VCCK I9
VCCK J15
VCCK M9
VCCK K6
VCCK K7
VCCK K8
VCCK K9
VCCK K11
VCCK K14
VCCK K15
VCCK M10
VCCK K16
VCCK K17
VCCK J17
VCCK J8
VCCK L7
VCCK L8
VCCK L9
VCCK L17
VCCK M6
VCCK M7
VCCK M8
VCCK J10
VCCK J11
VCCK J14
VCCK T16
VCCK L6
VCCK K12
VCCK T17
VCCK J16
VCCK J17
VCCK J12
VCCK J13
VCCK J14
VCCK J15
VCCK J16
VCCK M17
VCCK R17

A26 DUMMY

GND AC21
GND AB11
GND AE13
GND AD11
GND AC8
GND AB5
GND AB14
GND W26
GND T15
GND W23
GND T14
GND AE26
GND G3
GND K21
GND L11
GND L12
GND L14
GND L15
GND L16
GND M5
GND M11
GND M12
GND M13
GND M14
GND M15
GND M16
GND N10
GND N8
GND N9
GND N11
GND N12
GND N13
GND N14
GND N15
GND N16
GND N22
GND P10
GND P11
GND P12
GND P13
GND P14
GND P15
GND P16
GND R10
GND R11
GND R12
GND R13
GND R14
GND R15
GND R16
GND T10
GND T11
GND T12
GND T13
GND AF1
GND U10
GND U11
GND V13
GND W11
GND Y21

MT6572/TFBGA428/P0.4/80.2S/10.6X10.6

120mil

VPROC_PMU [3]

C1014 100nF
C1015 100nF
C1016 100nF
C1017 100nF
C1033 1uF
C1034 1uF
C1035 1uF
C1036 1uF
C1022 2.2uF
C1023 2.2uF
C1024 4.7uF
C1025 10uF
C1026 10uF
C1027 10uF

4mil - defferential - GND shielding

Vproc remote sense :
differential 4mil with good shielding, from the BB to PMIC

R1003 0R GND_VPROC_FB [3]
R101 0R VPROC_FB [3]

Charger

VCDT rating: 1.268V

VBUS
R701 330K 1%
VCDT [3]
R702 39K 1%
C701 1uF/10V
40mils
R703 3.3K
CHR_LDO [3]
Q1 CJF2535PL
Q702 SSM3K35MFV
G
D
S
VDRV [3]
40mils
Rsense
R704 0.22R
4mil
Differential
ISENSE [3]
VBAT [1,3,4,6,7,9,10]
40mils

BATTERY CONNECTOR
J302
B25-AB03F231
1
2
3
GND
T701 NC
T702 NC
AUXADC_REF [3,9]
R705 30K
R706 1K
R707 60K
VBAT [1,3,4,6,7,9,10]
BAT_ON [3]

R705 R707 must to be close to PMIC AUXADC_REF pin

VBAT
80mil
500mW
VF : 4.85V~5.36V
Between IC and IO port
D701 PZ3D4V2H
C722 22uF
T703 NC
30mil
4mil (VPA no use)
15mil
20mil
20mil
20mil
[3] VSYS_PMU
[1,2,3,5,7,9] VIO18_PMU

U3
MT6323
MT6323/VFBGA145/P0.4/B0.25/5.8X5.8

[1,3,4,6,7,9,10] VBAT
C716 2.2uF
P1 VBAT_SPK
L2 GND_SPK
[4] MICBIAS0
C717 100nF
[4] MICBIAS1
E2 AU_MICBIAS0
G2 AU_MICBIAS1
[4] AU_VIN0_P
[4] AU_VIN0_N
E4 AU_VIN0_P
F4 AU_VIN0_N
AUDIO
[4] AU_VIN1_P
[4] AU_VIN1_N
G3 AU_VIN1_P
G4 AU_VIN1_N
[3] VA_PMU
C718 1uF
D2 AU_VIN2_P
D1 AU_VIN2_N
J2 AVDD28_ABB
D3 AVDD28_AUXADC
H2 GND_ABB
[4] ACCDET
[9] CLK4_AUDIO
E2 ACCDET
E1 CLK26M

ISENSE/BSTSNS 4mil differential to Rsense

[1,3,4,6,7,9,10] VBAT
[3] ISENSE
[3] BAT_ON
[3] VCDT
[3] VDRV
P13 BATSNS
P12 ISENSE
K3 BATON
A12 VCDT
M13 VDRV
CHARGER
[3] CHR_LDO
C719 1uF
N13 CHRLDO

[1,7] PWRKEY
[1,5] WATCHDOG
[1] RESETB
R708 0R
M2 PWRKEY
A1 SYSRSTB
K4 RESETB
A9 FSOURCE
A7 INT
N12 EXT_PMIC_EN
[1] EINT_PMIC
CONTROL SIGNAL
N2 PMU_TESTMODE
[1] AUD_MOSI
[1] AUD_CLK
[1] AUD_MISO
E7 AUD_MOSI
F8 AUD_CLK
B6 AUD_MISO
[1,9] SRCLKENA
TP701
A2 SRCLKEN
M1 FCHR_ENB
[1] PMIC_SPI_SCK
[1] PMIC_SPI_CS
[1] PMIC_SPI_MOSI
[1] PMIC_SPI_MISO
D9 SPI_CLK
B7 SPI_CSN
D8 SPI_MOSI
B8 SPI_MISO
VBAT INPUT
F13 VBAT_VPROC
F14 VBAT_VPROC
G13 VBAT_VPROC
A13 VBAT_VPA
H13 VBAT_VSYS
P8 VBAT_LDOS3
P6 VBAT_LDOS3
P5 VBAT_LDOS2
P2 VBAT_LDOS1
J14 AVDD22_BUCK
M14 AVDD22_BUCK
A8 DVDD18_DIG
A5 DVDD18_IO
AUXADC
[3,9] AUXADC_REF
[9] AUXADC_TSX
C2 AUXADC_VREF18
B1 AUXADC_AUXIN_GPS
B2 AVSS28_AUXADC
C709 100nF
C710 100nF
[9] GND_AUXADC
R713 0R
GND
BC 1.1
[1] CHID_DM
[1] CHID_DP
A10 CHG_DM
A11 CHG_DP
SIM LVS
[1] SIM1_SCLK
[1] SIM1_SIO
B5 SIM1_AP_SCLK
M11 SIM1LS1_AP_SIO
F6 SIM1_AP_SRST
[1] SIM2_SCLK
[1] SIM2_SIO
C5 SIM2_AP_SCLK
K11 SIM2LS_AP_SIO
D6 SIM2_AP_SRST
[6] SCLK
[6] SIO
[6] SRST
M9 SIM1LS1_SCLK
N11 SIM1LS1_SIO
M10 SIM1LS1_SRST
[6] SCLK2
[6] SIO2
[6] SRST2
K9 SIM1LS2_SCLK
L11 SIM1LS2_SIO
K10 SIM1LS2_SRST
J10 GND_LDO
J9 GND_LDO
J8 GND_LDO
J7 GND_LDO
H10 GND_LDO
H9 GND_LDO
H8 GND_LDO
H7 GND_LDO
G9 GND_LDO
G8 GND_LDO
G7 GND_LDO
G6 GND_LDO

C703 10uF
C704 10uF
C723 1uF/NC
C724 1uF/NC
C706 10uF
C707 10uF
C725 1uF
C726 1uF

SPK_P
SPK_N
K1 AU_SPKP [4]
L1 AU_SPKN [4]
AU_HSP
AU_HSN
H1 AU_HSP [4]
G1 AU_HSN [4]
AU_HPL
AU_HPR
H4 AU_HPL [4]
I4 AU_HPR [4]
DRIVER
ISINK0
ISINK1
ISINK2
ISINK3
E9 ISINK0 [7]
C9 ISINK1 [3]
E10 ISINK2 [3]
C10 ISINK3 [3]
AOT-1615-3D-RGB
VBAT [1,3,4,6,7,9,10]
1 R
2 G
3 B
4 C
ISINK1 [3]
ISINK2 [3]
ISINK3 [3]
LED301

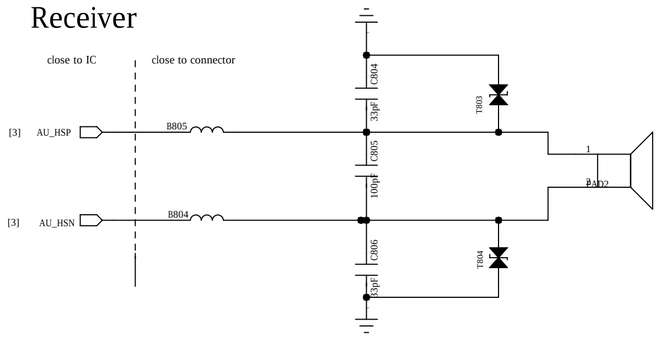
BUCK OUTPUT
VPROC
VPROC
VPROC
C14
D14
E14
D702 RB521CS-30
L701 0.68uH
VPROC_PMU [2]
VPROC_FB
GND_VPROC_FB
R12 VPROC_FB [2]
C12 GND_VPROC_FB [2]
VPA
VPA
A14
B14
VPA_FB
D12
D703 RB521CS-30
VSYS
H14
L702 0.68uH
VSYS_PMU [3]
ALDO OUTPUT
VA
VCN28
VTCXO
VCAMA
VCN33
AVDD33_RTC
M3 VA_PMU [3]
N3 VCN_2V8_PMU [8]
L4 VTCXO_PMU [2,9]
P3 VCAMA_PMU [6]
M6 VCN_3V3_PMU [8]
C3 VRTC [3]
C721 100nF
1uF C720
DLDO OUTPUT
VM
VRF18
VIO18
VIO28
VCN18
VCAMD
VCAM_IO
L13 VM_PMU [5]
H11 VRF18_PMU [9]
L12 VIO18_PMU [1,2,3,5,7,9]
M4 VIO28_PMU [2,4,6,7]
L12 VCN_1V8_PMU [8]
K14 VCAMD_PMU [6]
L13 VCAMD_IO_PMU [6]
VEMC_3V3
VMC
VMCH
VUSB
VSIM1
VSIM2
VGP1
P7 VEMC_3V3_PMU [3,5]
I6 VMC_PMU [2]
P4 VMCH_PMU [6]
N6 VUSB_PMU [2]
P9 VSIM1_PMU [6]
N9 VSIM2_PMU [6]
L8 VGP_MC
VIBR
VGP2
VGP3
VCAM_AF
M7 VIBR_PMU [3]
N8
L14 VGP3_PMU
N7 VCAM_AF_PMU
VEMC_3V3_PMU [3,5]
C4 100nF
VREF
GND_VREF
P14 VREF
N14
C711 100nF
RTC
RTC_32K1V8
RTC_32K2V8
XIN
XOUT
D5 CLK32K_BB [1]
C4
A3
A4
X1002
XTL721-S999-286
C712 18pF
C713 18pF
RTC
R709 0R
DCXO_32K [9]
GND_ISINK
GND_VSYS
GND_VPA
GND_VPROC
GND_VPROC
GND_VPROC
B10
G11
F13
E11
F11
E10
GND_LDO
GND_LDO
K6
K8
GND_LDO
GND_LDO
GND_LDO
GND_LDO
GND_LDO
GND_LDO
GND_LDO
GND_LDO
E5
F6
E7
E8
F9
G5
G6

VRTC
1K
22nF R710
C714

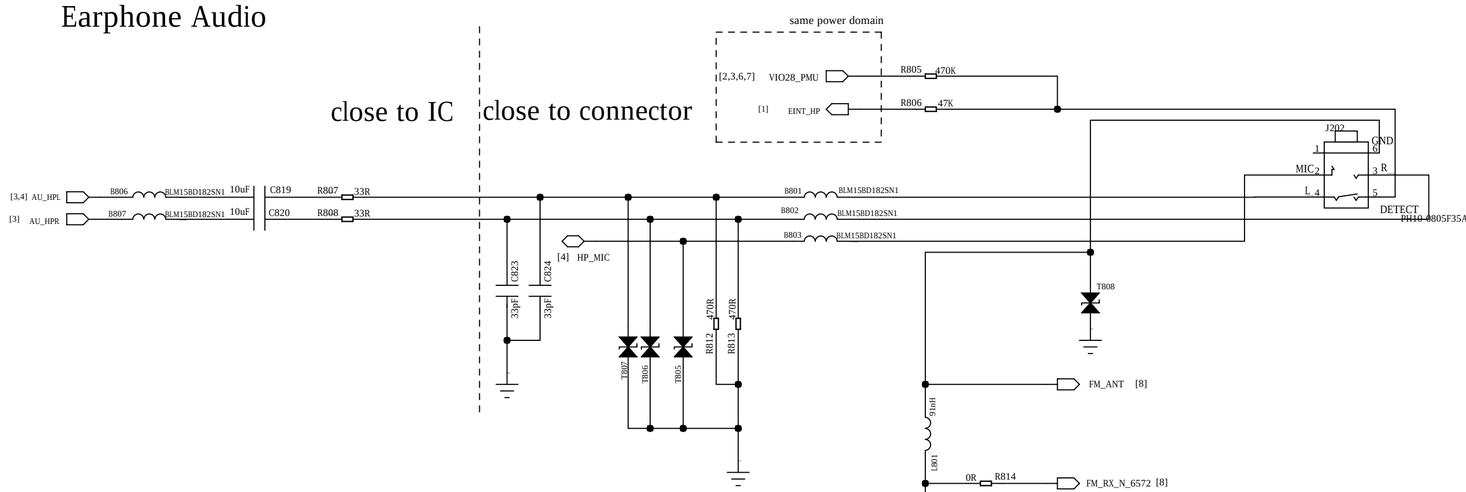
Vibrator
VIBR_PMU
PAD702
T715-VIB
1
2
C715 1uF

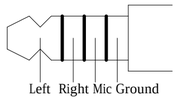
Receiver

Receiver

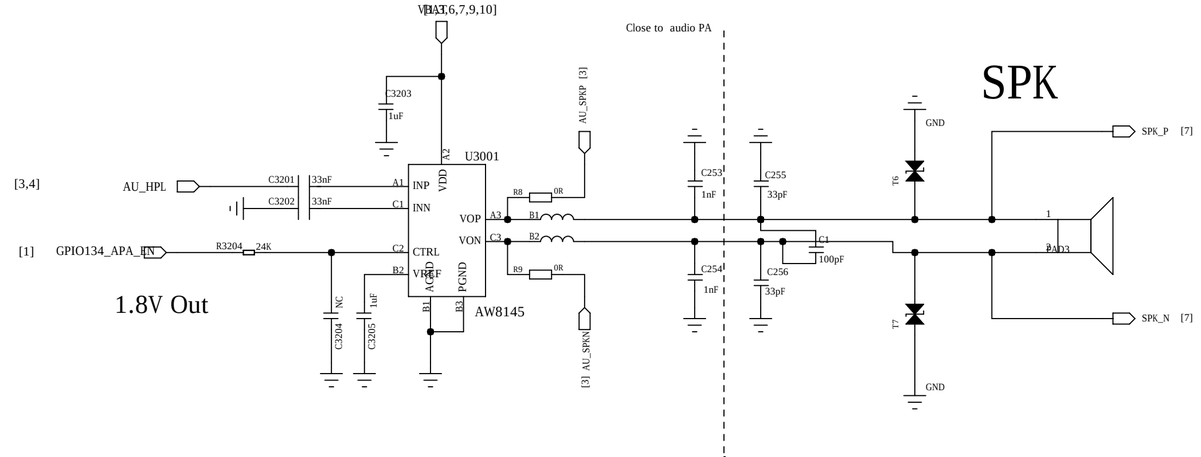


Earphone Audio



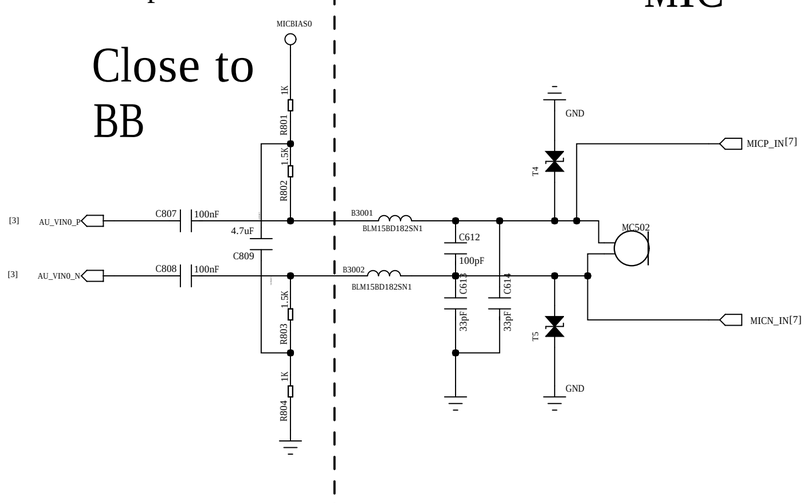


SPK

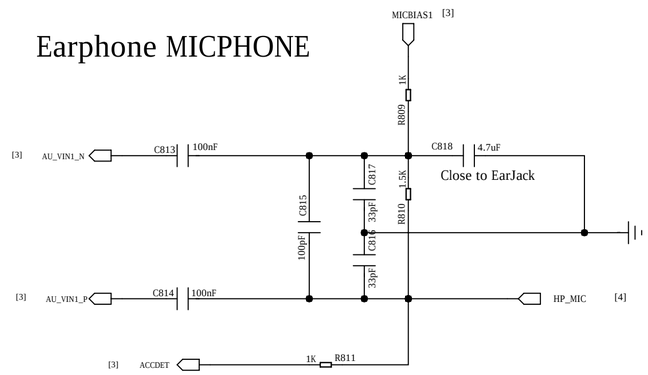


Handset Microphone 1

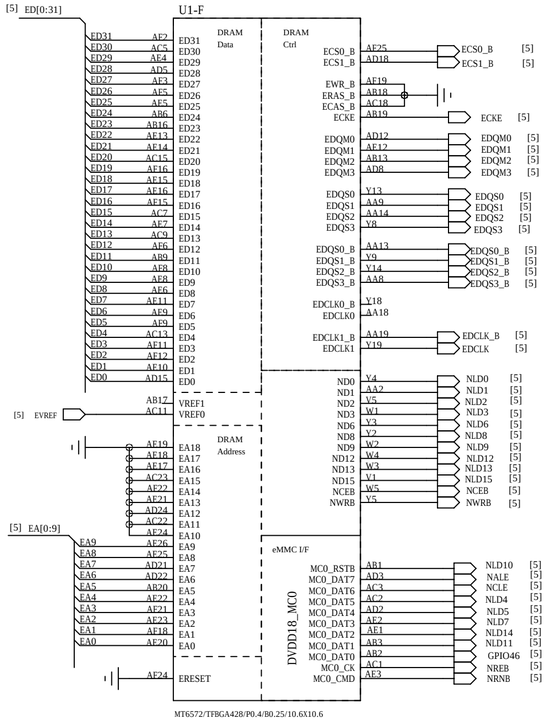
MIC



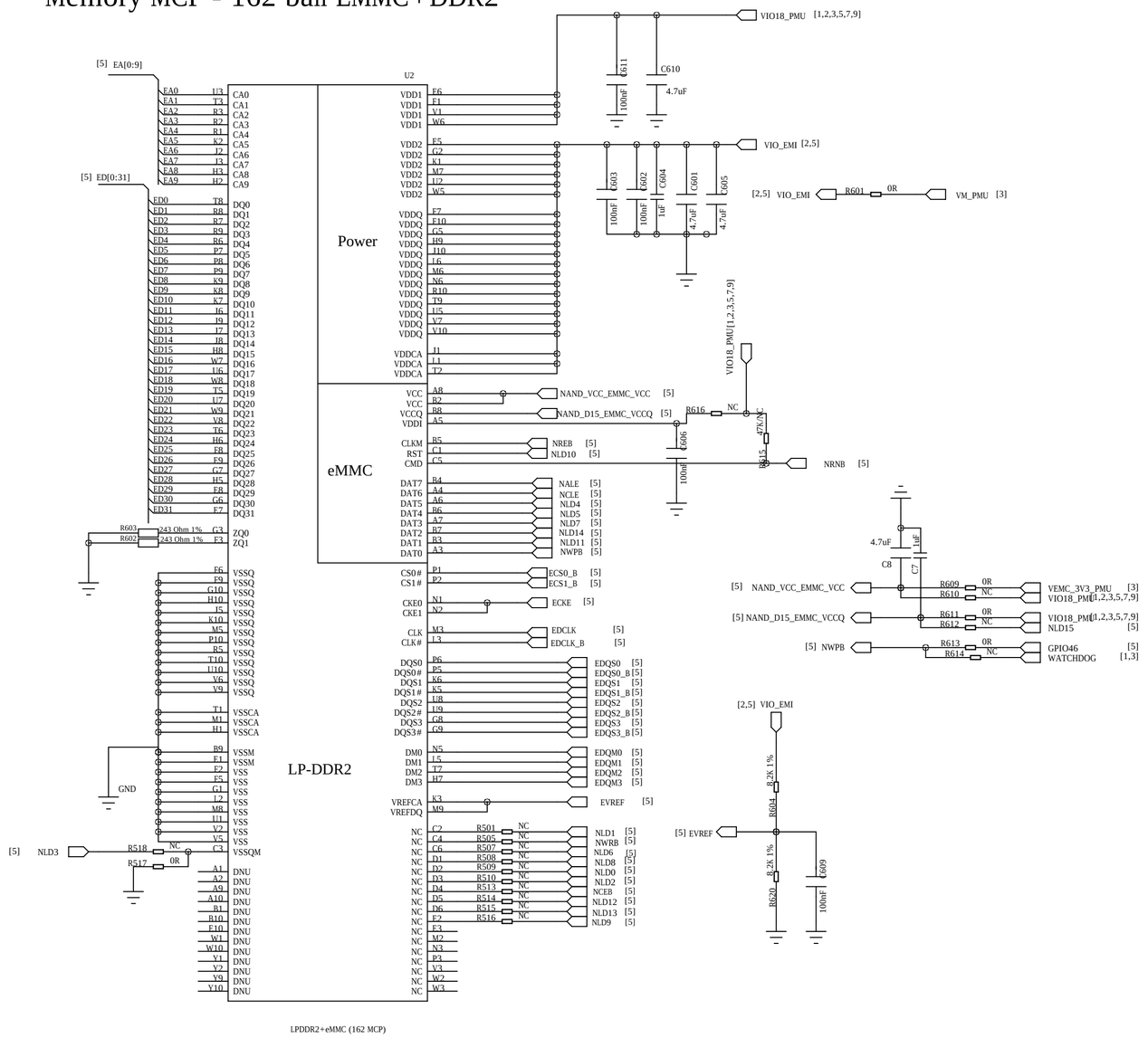
Earphone MICPHONE



Memory MCP - 162 ball EMMC+DDR2

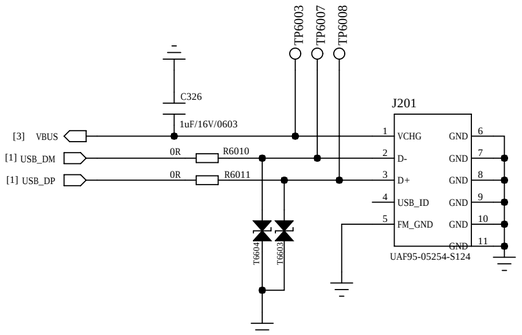


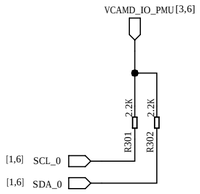
MT6572/TFBGA428/P0.4/B0.25/10.6X10.6

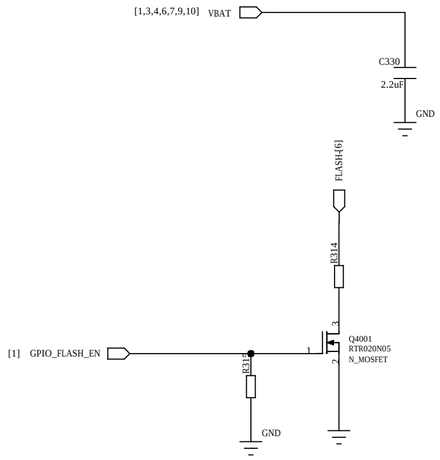


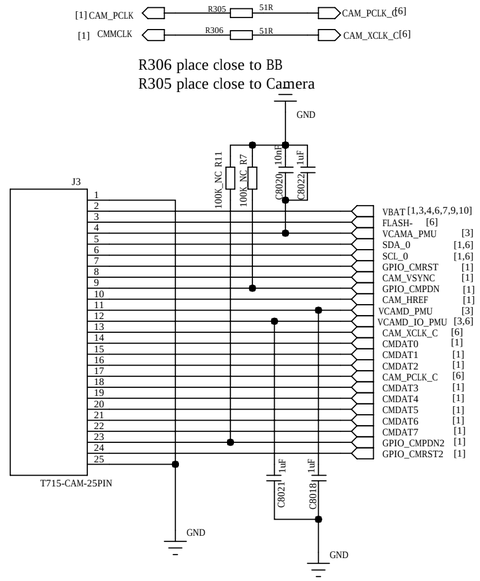
LPDDR2+eMMC (162 MCP)

Camera



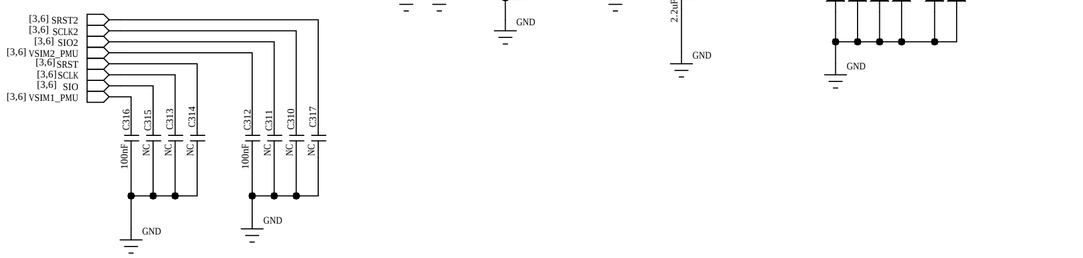


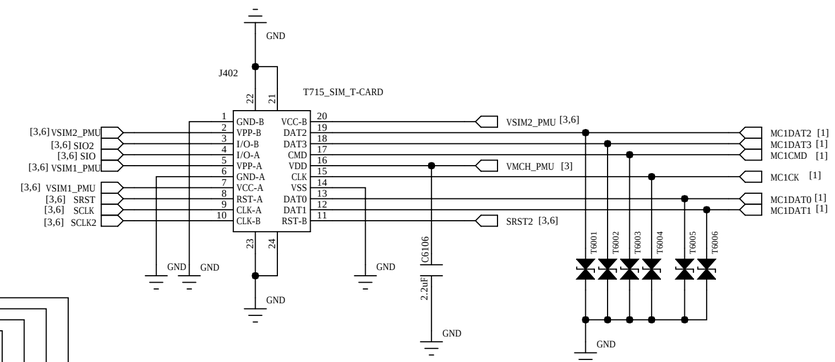


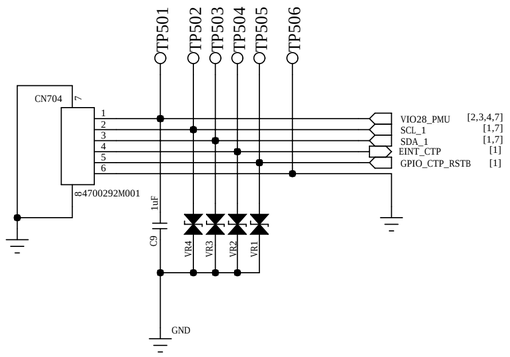


2014.03.20

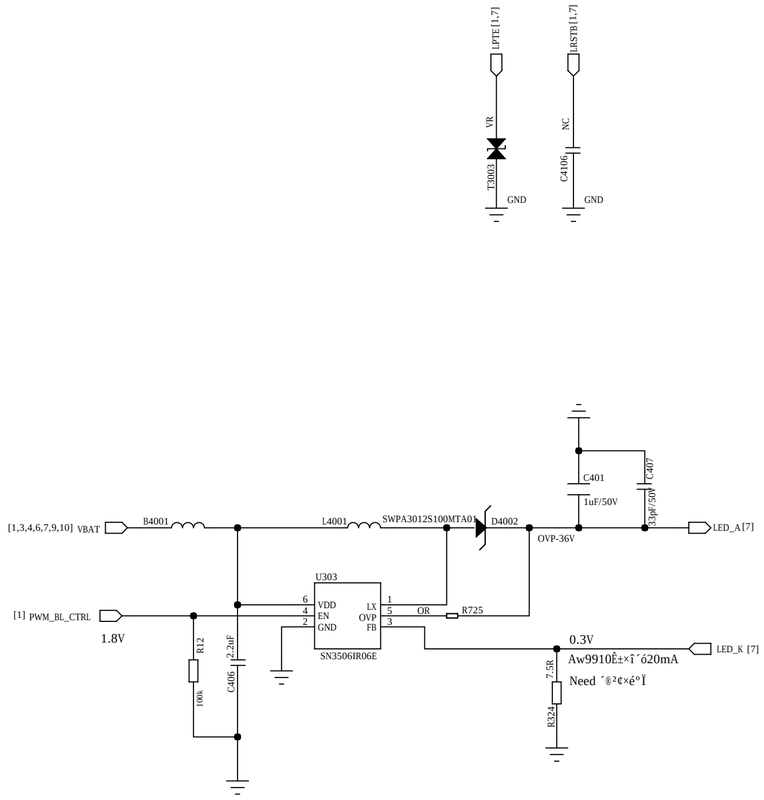
SIM CARD&T CARD





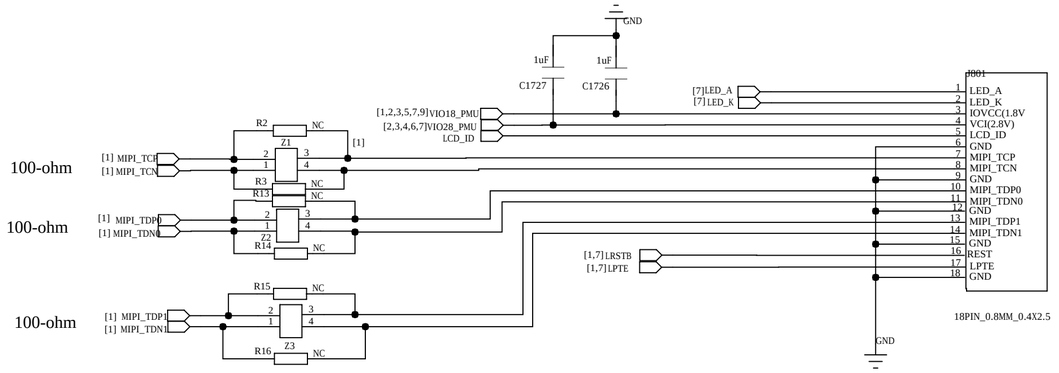


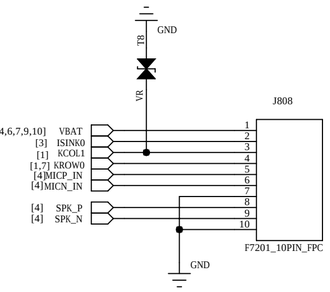
LCM Connector



LCM

LCM MIPI





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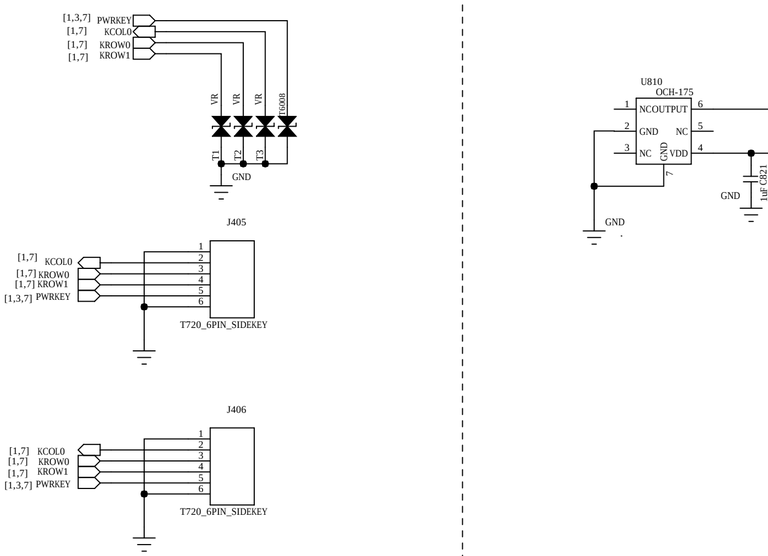
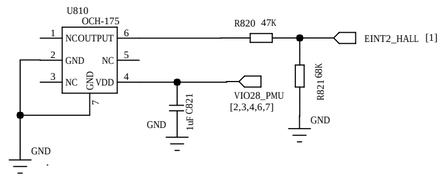
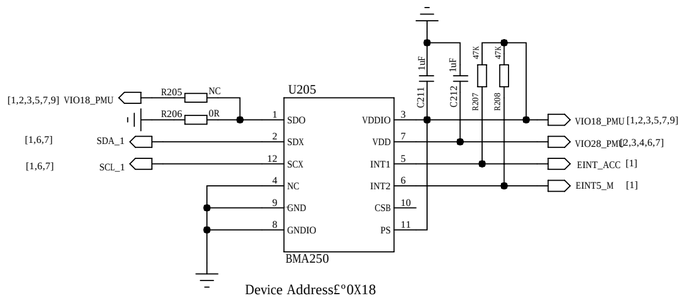


Hall-Sensor

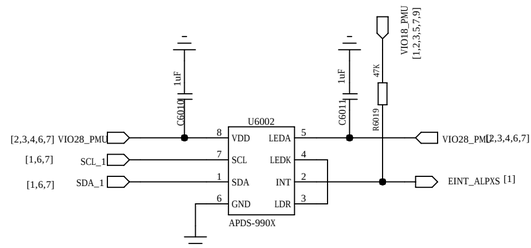


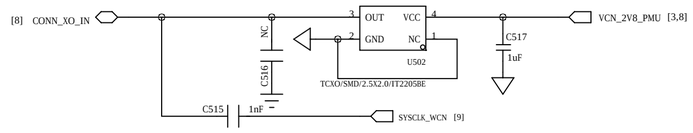
G-SENSOR

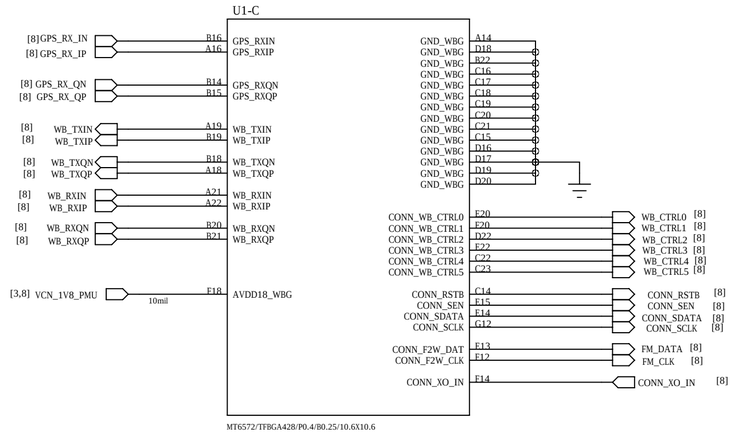


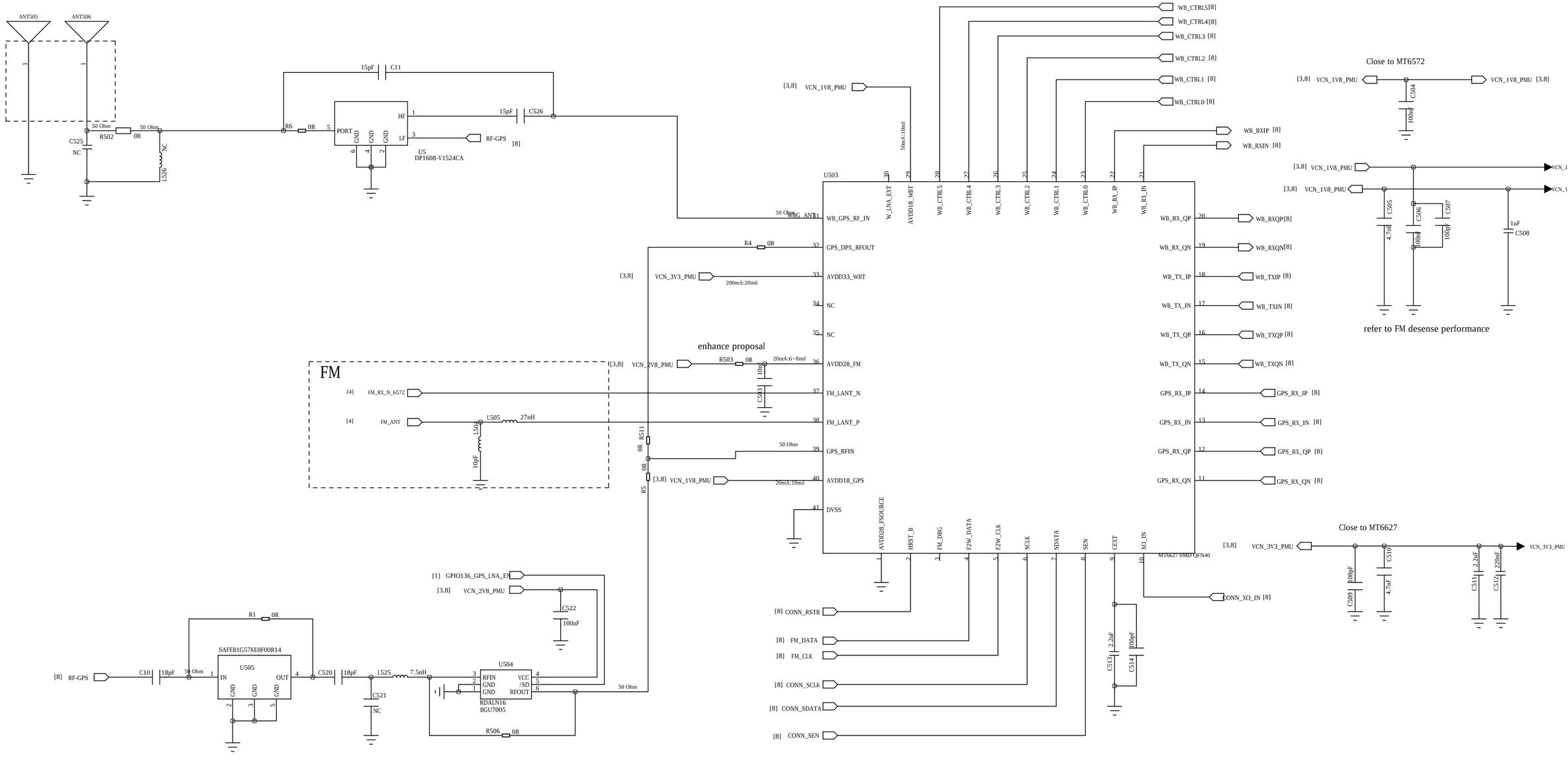
Device Address£°0X18
I2C Write:0X30, Read:0X31
250E°Í250Ô»ÊÇChipId²»Ò»Ñù

P-SENSOR



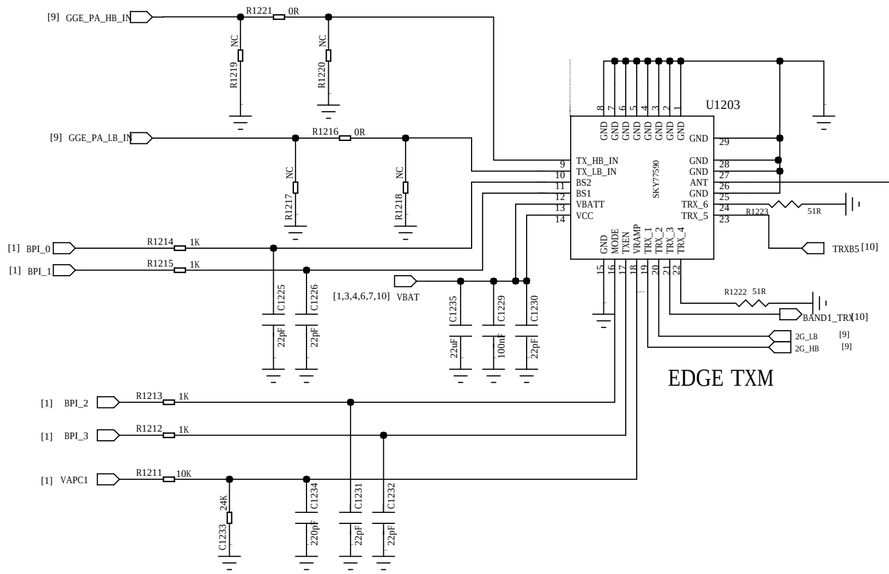

[8] CONN_XO_IN
NC
C516
OUT
VCC
GND
NC
U502
TCXO/SMD/2.5X2.0/IT2205BE
C517
1uF
VCN_2V8_PMU [3,8]
C515
1nF
SYSCLK_WCN [9]


U1-C
[8] GPS_RX_IN
[8] GPS_RX_IP
[8] GPS_RX_QN
[8] GPS_RX_QP
[8] WB_TXIN
[8] WB_TXIP
[8] WB_TXQN
[8] WB_TXQP
[8] WB_RXIN
[8] WB_RXIP
[8] WB_RXQN
[8] WB_RXQP
[3,8] VCN_1V8_PMU
10mil
B16 GPS_RXIN
A16 GPS_RXIP
B14 GPS_RXQN
B15 GPS_RXQP
A19 WB_TXIN
B19 WB_TXIP
B18 WB_TXQN
A18 WB_TXQP
A21 WB_RXIN
A22 WB_RXIP
B20 WB_RXQN
B21 WB_RXQP
F18 AVDD18_WBG
GND_WBG A14
GND_WBG D18
GND_WBG B22
GND_WBG C16
GND_WBG C17
GND_WBG C18
GND_WBG C19
GND_WBG C20
GND_WBG C21
GND_WBG C15
GND_WBG D16
GND_WBG D17
GND_WBG D19
GND_WBG D20
CONN_WB_CTRL0 E20
CONN_WB_CTRL1 E20
CONN_WB_CTRL2 D22
CONN_WB_CTRL3 E22
CONN_WB_CTRL4 C22
CONN_WB_CTRL5 C23
CONN_RSTB C14
CONN_SEN E15
CONN_SDATA E14
CONN_SCLK G12
CONN_F2W_DAT E13
CONN_F2W_CLK E12
CONN_XO_IN F14
WB_CTRL0 [8]
WB_CTRL1 [8]
WB_CTRL2 [8]
WB_CTRL3 [8]
WB_CTRL4 [8]
WB_CTRL5 [8]
CONN_RSTB [8]
CONN_SEN [8]
CONN_SDATA [8]
CONN_SCLK [8]
FM_DATA [8]
FM_CLK [8]
CONN_XO_IN [8]
MT6572/TFBGA428/P0.4/B0.25/10.6X10.6

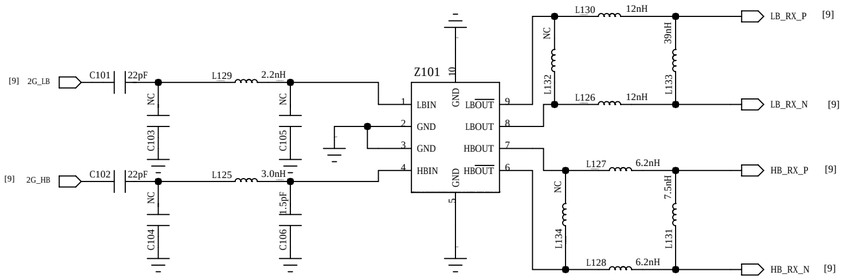

ANT505
ANT506
50 Ohm
R502
0R
C525
NC
L526
NC
15pF
C11
R6
0R
PORT
HF
LF
GND
GND
GND
U5
DP1608-V1524CA
15pF
C526
RF-GPS [8]
[3,8] VCN_1V8_PMU
50mA:10mil
U503
WBG_ANT
WB_GPS_RF_IN
GPS_DPX_RFOUT
R4
0R
[3,8] VCN_3V3_PMU
200mA:20mil
AVDD33_WBT
NC
NC
enhance proposal
FM
[3,8] VCN_2V8_PMU
R503
0R
20mA:6~8mil
10nF
C503
[4] FM_RX_N_6572
FM_LANT_N
[4] FM_ANT
L505
27nH
L504
10pF
FM_LANT_P
0R R511
50 Ohm
GPS_RFIN
0R
R5
[3,8] VCN_1V8_PMU
20mA:10mil
AVDD18_GPS
DVSS
W_LNA_EXT
AVDD18_WBT
WB_CTRL5
WB_CTRL4
WB_CTRL3
WB_CTRL2
WB_CTRL1
WB_CTRL0
WB_RX_IP
WB_RX_IN
WB_RX_QP
WB_RX_QN
WB_TX_IP
WB_TX_IN
WB_TX_QP
WB_TX_QN
GPS_RX_IP
GPS_RX_IN
GPS_RX_QP
GPS_RX_QN
WB_RXQP [8]
WB_RXQN [8]
WB_TXIP [8]
WB_TXIN [8]
WB_TXQP [8]
WB_TXQN [8]
GPS_RX_IP [8]
GPS_RX_IN [8]
GPS_RX_QP [8]
GPS_RX_QN [8]
AVDD28_FSOURCE
HRST_B
FM_DBG
F2W_DATA
F2W_CLK
SCLK
SDATA
SEN
CEXT
XO_IN
MT6627 SMD/QFN40
[8] CONN_RSTB
[8] FM_DATA
[8] FM_CLK
[8] CONN_SCLK
[8] CONN_SDATA
[8] CONN_SEN
[3,8] VCN_3V3_PMU
[8] CONN_XO_IN
C513 2.2uF
C514 100pF
Close to MT6572
[3,8] VCN_1V8_PMU
C504
10nF
C505 4.7nF
C506 100nF
C507 100pF
C508 1uF
refer to FM desense performance
Close to MT6627
C509 100pF
C510 4.7uF
C511 2.2uF
C512 220nF
[1] GPIO136_GPS_LNA_EN
[3,8] VCN_2V8_PMU
C522
100nF
R1
0R
SAFEB1G57KE0F00R14
U505
[8] RF-GPS
C10
18pF
50 Ohm
IN
OUT
GND
GND
GND
C520
18pF
L525
7.5nH
C521
NC
U504
RFIN
GND
GND
VCC
/SD
RFOUT
RDALN16
BGU7005
50 Ohm
R506
0R

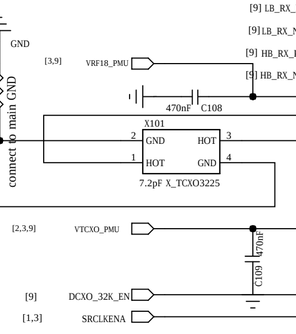
SKY77590 control logic table

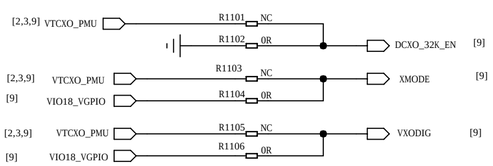
	Enable	VctC	VctB	VctA
LB_GMSK_TX	H	L	L	H
HB_GMSK_TX	H	L	H	H
LB_EDGE_TX	H	H	L	H
HB_EDGE_TX	H	H	H	H
TRX1	L	H	L	L
TRX2	L	H	H	L
TRX3	L	H	L	H
TRX4	L	H	H	H
TRX5	L	L	H	L
TRX6	L	L	L	H



EDGE TXM





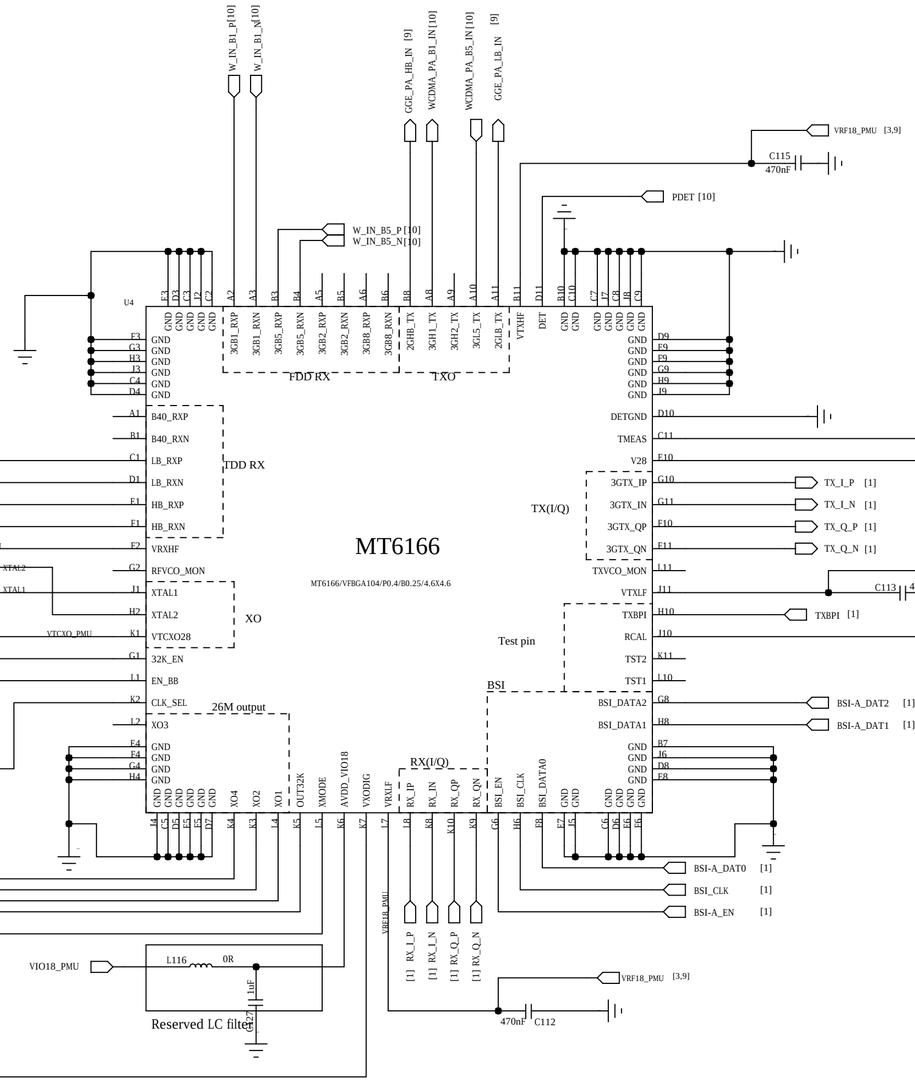


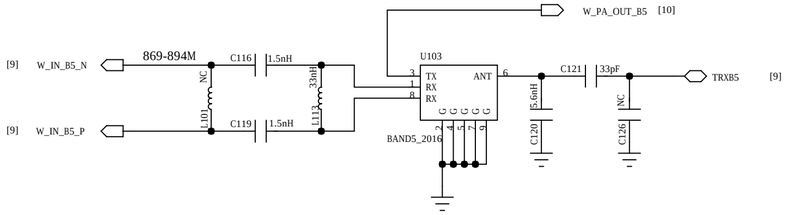
Logic / MODE	DCXO_32K_EN	XMODE	VXODIG
DCXO + 32K XO	0(GND)	1(VIO18)	1(VIO18)
DCXO + 32K-Less	1(VTXCO28)	1(VTXCO28)	1(VTXCO28)

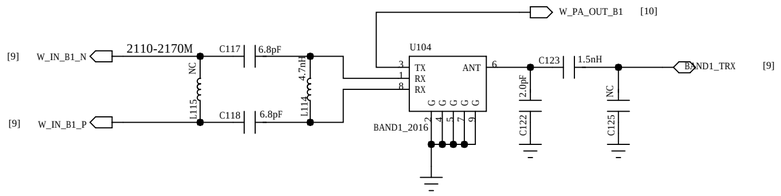
Two Application Circuit Conditions,
1.TSX Circuit : X600=TSX, R653=R656=NC, R654=100K+-1%, R655=R657=0ohm
2.XTAL Circuit :X600=Mobile XTAL, R653=R656=0ohm, R654=R655=R657=NC

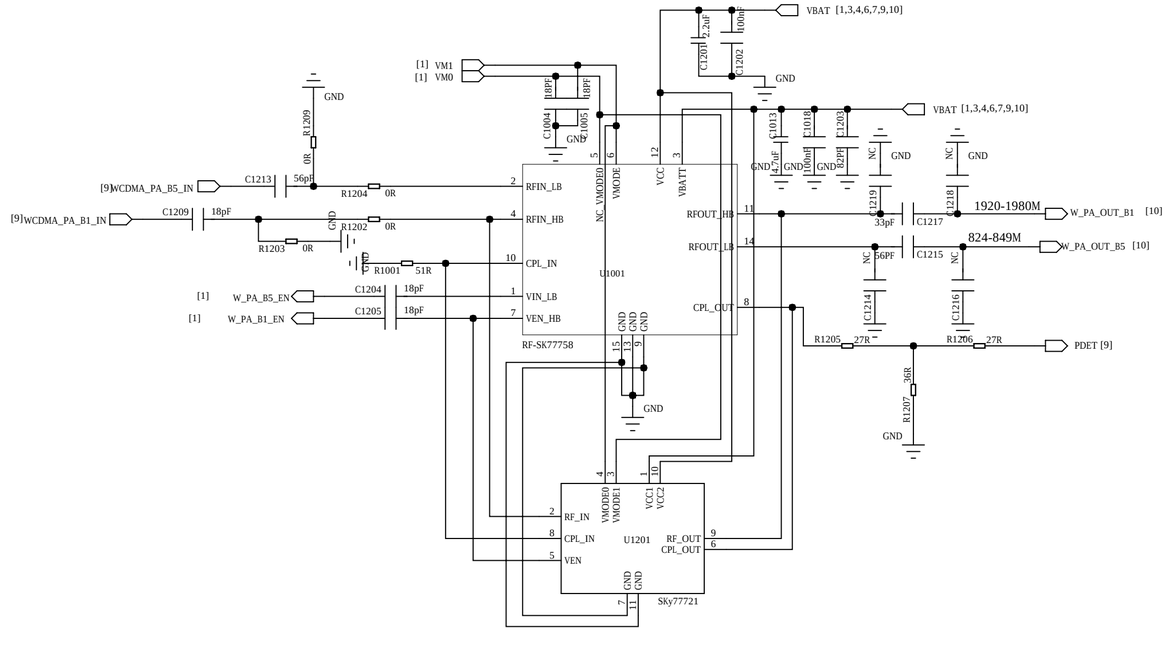
2014.06.08

J1201;R18
2014.04.25

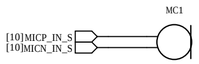




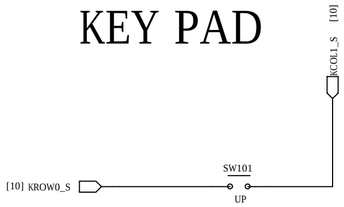




MIC



KEY PAD



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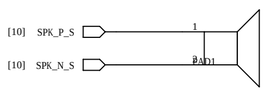
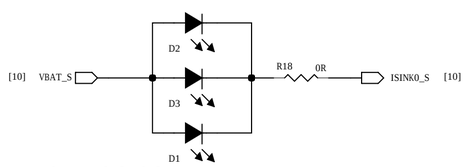
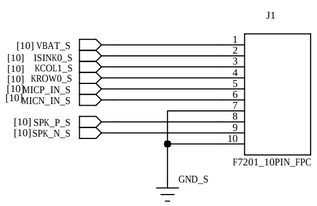
SPK







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